AD-A106 712 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 6/1
19304 MLRS MISSILE NUMBER V01-016 ROUND NUMBER V-189/MD-43.(U)
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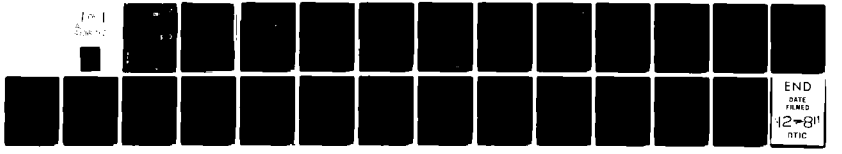

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LEVEL II

METEOROLOGICAL DATA REPORT

19304 MLRS
Missile Number V01-016
Round Number V-189/MD-43
17 Sept 1981

by

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ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM
UNITED STATES ARMY ELECTRONICS COMMAND

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Meteorological data gathered for the launching of the 19304 MLRS, Missile Number V01-016, Round Number V-189/MD-43 presented in tabular form.

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

CONTENTS

INTRODUCTION

19304 MLRS, Missile Number V01-016, Round Number V-189/MD-43, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1423:30 MDT, 17 Sept 1981. The scheduled launch time was 1415 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations.

a. Surface:

(1) Standard surface observations to include pressure, temperature (°C), relative humidity, dew point (°C), density (gm/m^3), wind speed and direction, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air:

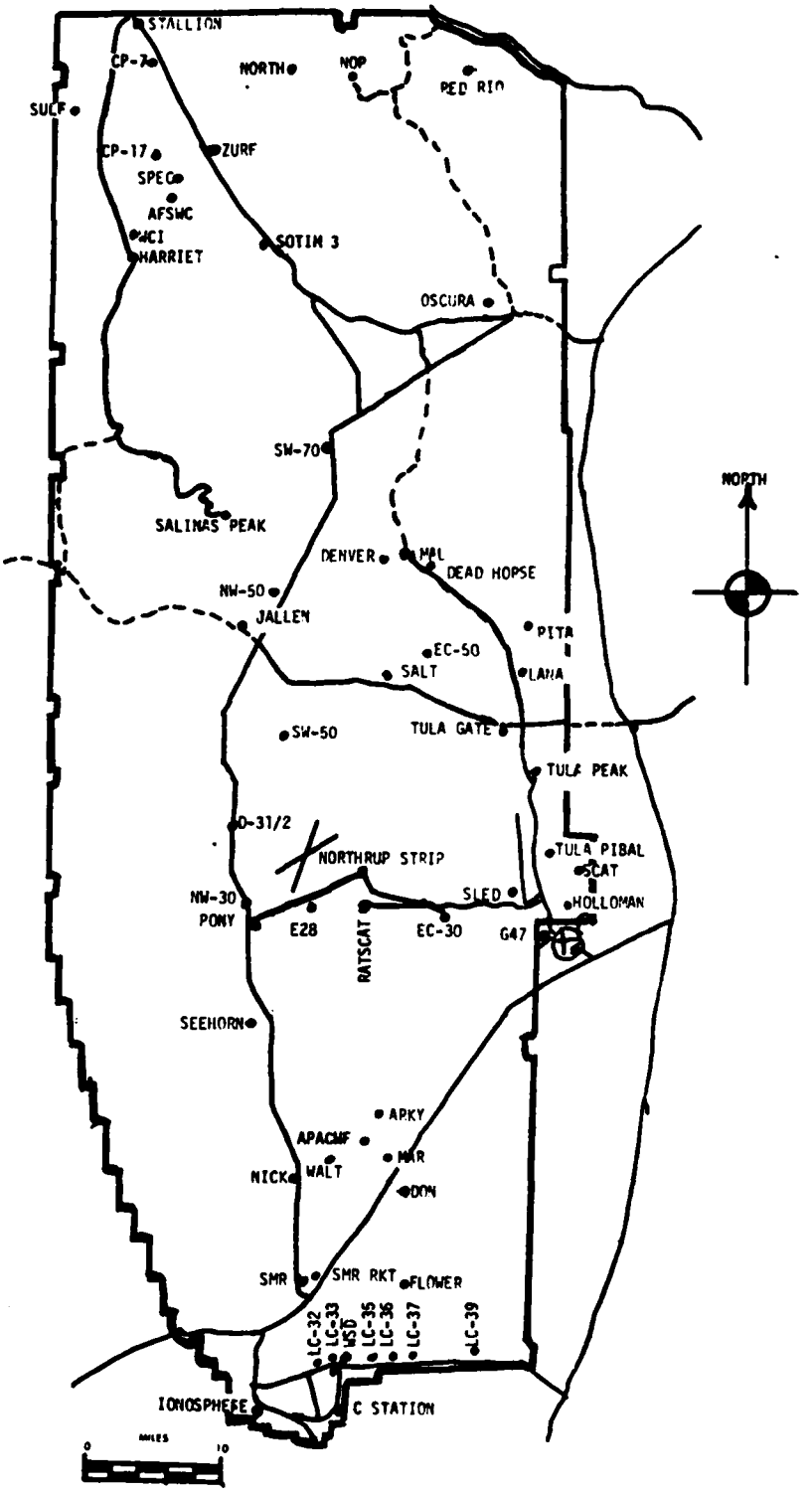
(1) Low level wind data were obtained from Pilot-Balloon observations at:

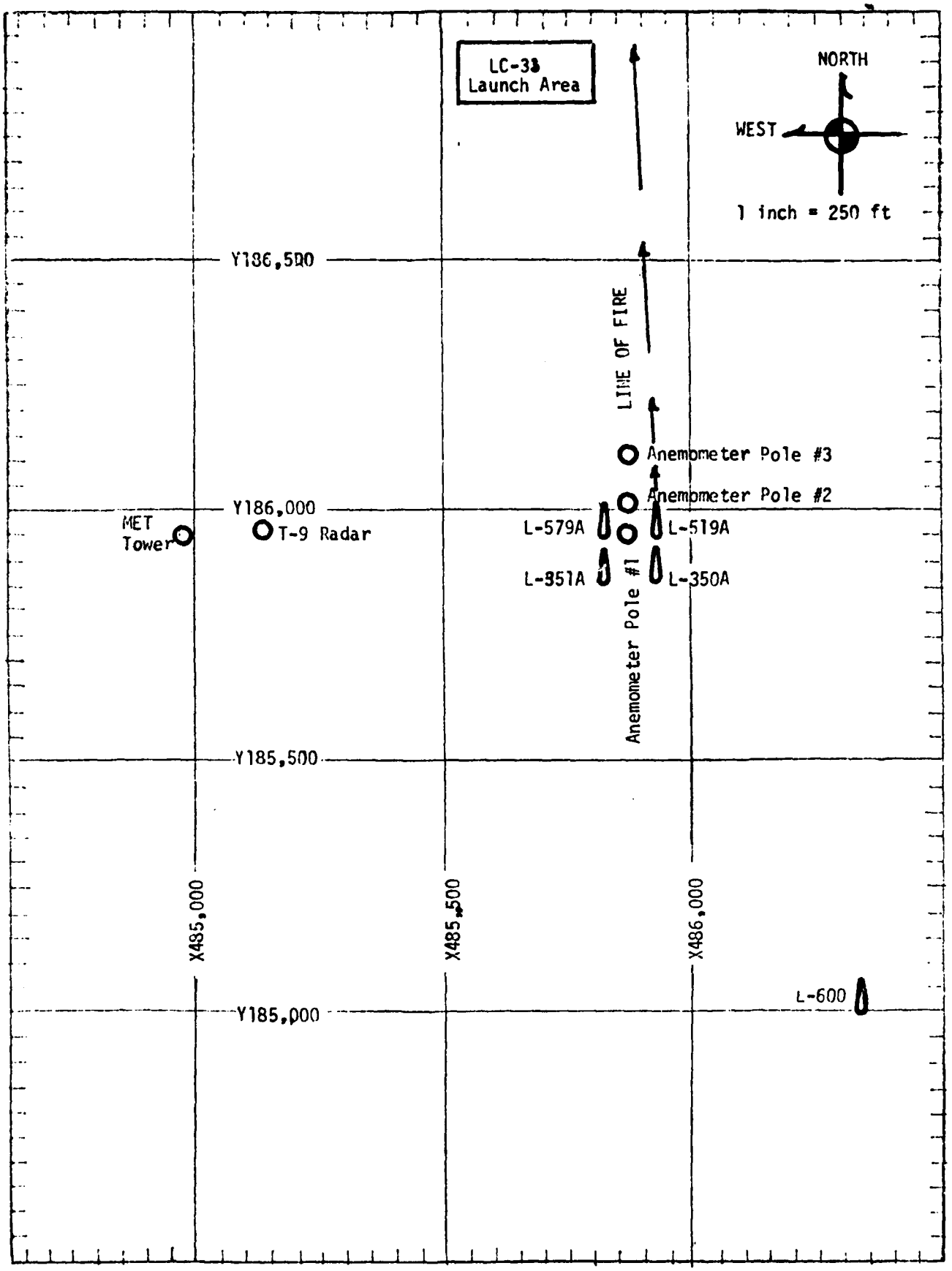
SITE AND ALTITUDE	
LC-33	2 KM
NICK	2 KM

(2) Air structure data (rawinsonde) were collected at the following Met Sites:

SITE AND TIME	
WSD	1115 MDT
WSD	1215 MDT
WSD	1315 MDT
WSD	1500 MDT

WSMR METEOROLOGICAL SITES




LC-39
Launch Area
NORTH
WEST
1 inch = 250 ft
Y186,500
LINE OF FIRE
Anemometer Pole #3
Anemometer Pole #2
Y186,000
MET
Tower
T-9 Radar
L-579A
L-519A
L-351A
L-350A
Anemometer Pole #1
Y185,500
X485,000
X485,500
X486,000
L-600
Y185,000

PROJECT SURFACE OBSERVATION

TABLE 1 STATION LC-33

DATE 17 (DAY) Sept (MONTH) 1981 (YEAR) X= 485,135.76 Y= 185,919.24 H= 3,988.57

TIME MDT	PRESSURE mbs	TEMPERATURE °F	TEMPERATURE °C	DEW POINT °F	DEW POINT °C	RELATIVE HUMIDITY %	DENSITY gm/m³	WIND DIRECTION degs Tn	WIND SPEED kts	WIND CHARACTER kts	VISIBILITY
1424	888.0		25.3		13.4	48	1035	140	04		20

OBSTRUCTIONS TO VISIBILITY	CLOUDS 1st LAYER AMT	1st LAYER TYPE	1st LAYER HGT	2nd LAYER AMT	2nd LAYER TYPE	2nd LAYER HGT	3rd LAYER AMT	3rd LAYER TYPE	3rd LAYER HGT	REMARKS
H A Z E	3	CU	6,000	1	AC	12,000	5	CS	25,000	

PSYCHROMETRIC COMPUTATION

TIME: MDT	1424		
DRY BULB TEMP.	25.3		
WET BULB TEMP.	17.4		
WET BULB DEPR.	7.9		
DEW POINT	13.4		
RELATIVE HUMID.	48		

TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL			POLE #2 X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL			POLE #3 X485,877.20 Y186,116.06 H4063.92 83.6 ft. AGL		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	C A L M		T-30	C A L M		T-30	090	02
T-20	C A L M		T-20	C A L M		T-20	090	01
T-10	C A L M		T-10	C A L M		T-10	105	01
T0.0	093	05	T0.0	C A L M		T0.0	123	02
T+10	117	04	T+10	237	03	T+10	129	04

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484.982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	078	03	T-30	099	03
T-20	066	02	T-20	085	03
T-10	118	01	T-10	083	03
T0.0	101	03	T0.0	103	03
T+10	117	04	T+10	110	04

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	124	04	T-30	107	07
T-20	123	03	T-20	108	05
T-10	102	03	T-10	120	05
T0.0	087	03	T0.0	112	04
T+10	108	04	T+10	116	05

TABLE 4

T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 17 Sept 1981

SITE: LC-33
TIME: 1424 MDT
WSTN COORDINATES:
X= 486,872.00
Y= 184,146.75
H= 3,981.15

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	100	03
150	066	03
210	101	03
270	118	01
330	045	02
390	106	04
500	127	08
650	115	08
800	133	09
950	130	10
1150	125	07
1350	142	10
1550	144	10
1750	175	04
2000	119	03

SITE: NICK
TIME: 1424 MDT
WSTN COORDINATES:
X= 470,734.56
Y= 255,775.64
H= 4,126.57

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	218	02
150	213	04
210	226	05
270	198	05
330	204	05
390	210	03
500	214	03
650	218	04
800	203	04
950	196	04
1150	206	02
1350	234	03
1550	270	10
1750	275	05
2000	308	03

TABLE 5

AIMING AND T-TIME COMPUTER MET MESSAGES
17 Sept 1981

WSD 1115 MDT		WSD 1215 MDT		WSD 1315 MDT	
METCM1324064		METCM1324064		METCM1324064	
171730122890		171830122890		171930122889	
00293003	29780890	00276006	29920890	00267008	30040889
01247013	29500880	01271013	29530879	01264014	29710879
02103005	29190855	02232010	29240854	02261007	29350854
03215011	28780815	03218009	28880815	03276007	28950814
04228009	28440768	04244007	28540768	04253006	28490768
05265006	28300723	05265004	28270723	05266003	]8260723
06247001	27900681	06161003	27860681	06161003	27890680

WSD 1500 MDT	
METCM1324064	
172100122887	
00276008	30090887
01270011	29770877
02245010	29480852
03257010	29120813
04247006	28670767
05250004	28250722
06191004	27930680

STATION ALTITUDE 3989.00 FEET MSL
17 SEP. 61 1115 HRS MDT
ASCENSION NO. 602

SIGNIFICANT LEVEL DATA
26000. DROP
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 6

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
890.2	3989.0	22.9	11.3	48.0
883.4	4207.5	20.3	8.9	48.0
850.0	5294.2	16.7	6.7	59.0
785.4	7483.7	9.9	6.3	90.0
766.2	8160.6	9.5	5.7	77.0
747.2	8847.5	10.3	4.2	66.0
728.0	9559.0	9.2	2.5	63.0
700.0	10624.1	6.5	4.2	85.0
652.4	12511.8	1.9	.7	92.0
596.4	15142.8	-2.5	-7.4	69.0
573.4	15004.6	-3.2	-14.5	41.0
514.6	18694.3	-8.2	-20.6	36.0
500.0	19427.2	-9.9	-20.3	42.0
490.6	19908.0	-10.8	-23.5	34.0
443.6	22427.2	-16.5	-28.6	34.0
428.2	23299.6	-17.6	-26.9	44.0
413.6	24150.8	-19.7	-30.6	37.0
377.2	26381.2	-24.4	-32.2	48.0
349.6	28187.9	-28.8	-34.1	60.0

STATION ALTITUDE 3989.00 FEET MSL
17 SEP. 81 1115 HRS MDT
ASCENSION NO. 002

UPPER AIR DATA
2600020002
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 7

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	890.2	22.9	11.3	48.0	1041.5	672.2	165.0	2.9	1.000290
4000.0	889.9	22.8	11.2	48.0	1041.6	672.1	164.4	2.9	1.000290
4500.0	874.3	19.3	8.9	51.0	1036.2	667.9	144.3	4.1	1.000282
5000.0	858.9	17.7	8.8	56.0	1023.7	666.0	133.7	5.5	1.000279
5500.0	843.7	16.1	8.8	61.9	1011.1	664.2	127.5	7.0	1.000277
6000.0	828.6	14.5	8.9	69.0	998.3	662.5	123.6	8.5	1.000275
6500.0	813.8	13.0	8.8	76.1	985.6	660.7	120.8	10.1	1.000272
7000.0	799.2	11.4	8.6	83.2	973.3	658.9	121.0	10.3	1.000269
7500.0	784.9	9.9	8.3	89.7	961.0	657.2	125.3	9.7	1.000266
8000.0	770.7	9.6	6.3	80.1	949.1	656.6	128.9	9.1	1.000256
8500.0	756.8	9.9	5.0	71.6	937.3	656.9	132.3	8.5	1.000248
9000.0	743.0	10.1	3.9	65.4	926.2	657.0	136.3	7.6	1.000241
9500.0	729.6	9.3	2.7	63.2	916.4	656.0	142.6	6.1	1.000235
10000.0	716.3	8.1	3.4	72.1	903.6	654.7	149.9	4.7	1.000234
10500.0	703.2	6.8	4.0	82.4	891.2	653.3	157.2	3.4	1.000234
11000.0	690.3	5.6	3.5	86.4	879.0	651.8	151.0	2.2	1.000230
11500.0	677.5	4.4	2.6	88.2	867.0	650.3	113.9	1.7	1.000225
12000.0	665.0	3.1	1.7	90.1	855.1	648.8	78.2	2.8	1.000220
12500.0	652.7	1.9	.8	92.0	843.5	647.3	66.1	4.5	1.000216
13000.0	640.4	1.1	-.7	87.7	830.8	646.2	78.5	5.2	1.000210
13500.0	628.4	.2	-2.2	83.4	818.2	645.2	90.9	6.1	1.000204
14000.0	616.6	-.6	-3.8	79.0	805.8	644.1	129.0	4.3	1.000199
14500.0	605.0	-1.4	-5.3	74.6	793.6	643.0	175.9	5.0	1.000193
15000.0	593.6	-2.3	-6.9	70.2	781.6	641.9	213.4	5.9	1.000188
15500.0	582.4	-2.8	-10.4	55.9	769.1	641.1	236.3	7.4	1.000181
16000.0	571.3	-3.4	-14.8	40.8	756.7	640.3	257.7	7.6	1.000174
16500.0	560.3	-4.3	-15.8	39.9	745.1	639.2	271.1	7.9	1.000171
17000.0	549.6	-5.2	-16.9	39.0	733.6	638.1	278.5	7.5	1.000168
17500.0	539.0	-6.1	-18.0	38.1	722.3	637.0	280.9	6.7	1.000164
18000.0	528.6	-7.0	-19.1	37.2	691.2	635.9	279.6	5.6	1.000161
18500.0	518.5	-7.9	-20.2	36.3	680.2	634.8	282.0	5.0	1.000158
19000.0	508.5	-8.9	-20.4	38.5	669.7	633.6	287.0	4.6	1.000156
19500.0	498.6	-10.0	-20.8	40.8	659.5	632.2	289.5	4.0	1.000153
20000.0	488.8	-11.0	-23.7	34.0	649.1	631.0	291.8	3.3	1.000150
20500.0	479.1	-12.1	-24.7	34.0	639.1	629.6	271.9	2.4	1.000147
21000.0	469.6	-13.3	-25.7	34.0	629.2	628.2	234.3	2.3	1.000144
21500.0	460.4	-14.4	-26.8	34.0	619.4	626.8	207.9	2.6	1.000142
22000.0	451.2	-15.5	-27.8	34.0	609.9	625.5	190.7	3.3	1.000139
22500.0	442.3	-16.6	-28.5	34.8	600.3	624.2	182.7	3.4	1.000137
23000.0	433.4	-17.2	-27.4	40.6	589.6	623.4	140.6	4.2	1.000135

UPPER AIR DATA

STATION ALTITUDE 3989.00 FEET MSL
17 SEP. 81 1115 HRS MDT
ASCENSION NO. 002

2000020002
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 7 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
23500.0	424.7	-18.1	-27.7	42.4	579.8	622.3	147.9	5.8	1.000133
24000.0	416.2	-19.3	-29.9	38.2	570.9	620.8	154.7	7.4	1.000130
24500.0	407.7	-20.4	-30.8	38.7	561.7	619.4	169.5	9.1	1.000128
25000.0	399.3	-21.5	-31.1	41.2	552.6	618.2	178.8	10.6	1.000126
25500.0	391.2	-22.5	-31.5	43.7	543.5	616.9	185.3	11.2	1.000124
26000.0	383.2	-23.6	-31.9	46.1	534.7	615.6	190.2	11.1	1.000122
26500.0	375.3	-24.7	-32.3	48.8	526.0	614.2	194.6	10.4	1.000120
27000.0	367.5	-25.9	-32.8	52.1	517.6	612.7			1.000118
27500.0	359.9	-27.1	-33.3	55.4	509.4	611.2			1.000116
28000.0	352.4	-28.3	-33.9	58.8	501.2	609.7			1.000114

STATION ALTITUDE 3989.00 FEET MSL
17 SEP. 81 1115 HRS MDT
ASCENSION NO. 002

MANDATORY LEVELS
260002002
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 8

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	WIND DATA # DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	5290.	16.7	8.7	59.	129.7	6.3
800.0	6972.	11.5	8.7	83.	121.7	10.4
750.0	8737.	10.2	4.5	68.	134.1	8.2
700.0	10613.	6.5	4.2	85.	159.9	5.0
650.0	12596.	1.7	.5	91.	66.0	4.8
600.0	14703.	-1.8	-6.0	73.	193.4	5.1
550.0	16963.	-5.1	-16.9	39.	278.1	7.6
500.0	19399.	-9.9	-20.3	42.	289.2	4.1
450.0	22038.	-15.7	-27.9	34.	188.6	3.3
400.0	24923.	-21.4	-31.1	41.	178.2	10.5
350.0	28109.	-28.7	-34.0	60.		

STATION ALTITUDE 3989.00 FEET MSL
17 SEP. 81 1215 HRS MDT
ASCENSION NO. 033

SIGNIFICANT LEVEL DATA
26000.0,0.03
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 9

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT
890.5	3989.0	24.3	11.6	45.0
885.6	4114.7	21.0	9.3	47.0
850.0	5274.0	17.3	6.4	56.0
774.8	7703.9	11.0	6.9	76.0
750.6	8716.0	10.6	2.9	59.0
721.8	9784.3	8.5	1.6	62.0
700.0	10615.0	5.9	3.6	85.0
657.8	12281.4	2.4	1.1	91.0
621.8	13770.3	-.8	-5.8	69.0
586.0	15323.1	-2.7	-10.2	56.0

UPPER AIR DATA
2600020603
WHITE SANDS

STATION ALTITUDE 3989.00 FEET MSL
17 SEP. 61 1215 HRS MDT
ASCENSION NO. 003

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 10

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	889.5	24.3	11.6	45.0	1035.7	673.9	155.0	6.0	1.000269
4000.0	889.2	24.0	11.4	45.2	1036.4	673.5	154.6	6.0	1.000269
4500.0	873.6	19.8	9.1	50.0	1033.8	668.4	145.6	6.6	1.000261
5000.0	858.3	18.2	8.7	53.9	1021.2	666.6	138.1	7.4	1.000278
5500.0	843.1	16.7	8.4	57.9	1008.3	664.9	132.1	8.3	1.000274
6000.0	828.1	15.4	8.2	62.0	994.7	663.4	127.3	9.2	1.000271
6500.0	813.3	14.1	7.9	66.1	981.4	661.9	125.4	9.2	1.000268
7000.0	798.8	12.8	7.5	70.2	968.3	660.4	125.2	8.2	1.000264
7500.0	784.5	11.5	7.1	74.3	955.4	658.9	128.0	7.5	1.000260
8000.0	770.4	10.9	5.8	71.0	940.6	658.1	134.0	7.4	1.000253
8500.0	756.5	10.7	3.9	62.6	924.8	657.7	138.0	7.1	1.000244
9000.0	742.8	10.0	2.6	59.8	910.4	656.8	140.7	6.9	1.000238
9500.0	729.4	9.1	2.0	61.2	897.0	655.7	144.7	5.3	1.000233
10000.0	716.1	7.8	2.3	68.0	884.4	654.3	151.4	3.6	1.000232
10500.0	703.0	6.3	3.4	81.8	872.8	652.6	136.4	2.5	1.000232
11000.0	690.0	5.1	3.0	86.4	860.3	651.2	104.9	2.2	1.000229
11500.0	677.3	4.0	2.3	89.2	847.7	649.9	82.9	3.5	1.000224
12000.0	664.7	3.0	1.5	90.0	835.4	648.6	79.1	4.7	1.000220
12500.0	652.4	1.9	.1	87.8	823.2	647.3	81.4	5.7	1.000214
13000.0	640.2	.9	-2.1	80.4	811.4	645.9	89.9	5.7	1.000207
13500.0	628.2	-.2	-4.5	73.0	799.7	644.5	103.5	5.3	1.000200
14000.0	616.4	-1.1	-6.4	67.1	787.4	643.3			1.000195
14500.0	604.7	-1.7	-7.8	62.9	774.4	642.5			1.000190
15000.0	593.3	-2.3	-9.3	58.7	761.6	641.8			1.000185

STATION ALTITUDE 3089.00 FEET MSL
17 SEP. 81 1215 HRS MDT
ASCENSION NO. 003

MANDATORY LEVELS
2600020603
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE II

PRESSURE	GEOPOTENTIAL	TEMPERATURE		REL.HUM.	WIND DATA	
		AIR	DEWPOINT		DIRECTION	SPEED
MILLIBARS	FEET	DEGREES CENTIGRADE		PERCENT	DEGREES(TN)	KNOTS
850.0	5270.	17.3	8.4	56.	134.7	7.9
800.0	6950.	12.9	7.0	70.	125.2	8.2
750.0	8730.	10.6	2.9	59.	139.2	7.0
700.0	10604.	5.9	3.0	85.	131.3	2.3
650.0	12585.	1.7	-3.3	86.	81.8	5.9
600.0	14689.	-1.9	-8.4	61.		

STATION ALTITUDE 3989.00 FEET MSL
17 SEP. 81 1315 HRS MDT
ASCENSION NO. 004

SIGNIFICANT LEVEL DATA
26000.0004
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 12

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT
888.7	3989.0	25.6	11.0	40.0
877.8	4343.4	22.0	9.5	45.0
859.0	5256.0	18.4	8.1	51.0
757.4	8455.4	9.3	4.5	72.0
729.4	9482.8	9.1	.8	56.0
713.4	10086.1	8.0	1.2	62.0
700.0	10599.6	6.3	2.8	78.0
658.4	12243.0	2.6	.7	87.0
622.6	13724.1	.0	-9.9	47.0
596.0	14871.4	-1.5	-8.2	60.0
578.8	15637.2	-2.6	-13.7	42.0

STATION ALTITUDE 3989.0 FEET MSL
17 SEP. 81 1315 HRS MDT
ASCENSION NO. 004

UPPER AIR DATA
260002004
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 13

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.1	886.7	25.6	11.0	40.0	1030.5	675.3	150.0	8.0	1.000265
4000.0	886.4	25.5	11.0	40.2	1030.5	675.1	150.0	8.0	1.000265
4500.0	873.0	21.4	9.3	46.0	1027.3	670.3	151.9	7.7	1.000260
5000.0	857.7	19.4	8.5	49.3	1016.3	668.0	153.9	7.5	1.000276
5500.0	842.6	17.7	7.9	52.6	1004.3	666.0	156.0	7.3	1.000272
6000.0	827.5	16.3	7.5	55.9	991.3	664.4	157.3	7.1	1.000268
6500.0	812.7	14.9	7.0	59.2	978.5	662.7	156.6	7.0	1.000264
7000.0	798.2	13.4	6.4	62.4	965.8	661.0	148.6	6.1	1.000260
7500.0	783.9	12.0	5.8	65.7	953.4	659.3	137.9	5.3	1.000256
8000.0	769.9	10.6	5.2	69.0	941.2	657.7	138.0	5.1	1.000251
8500.0	756.2	9.3	4.4	71.3	929.8	656.1	142.3	5.0	1.000247
9000.0	742.4	9.2	2.6	63.5	912.6	655.8	149.5	5.0	1.000238
9500.0	728.9	9.1	.8	56.2	896.8	655.6	149.7	4.6	1.000231
10000.0	715.7	8.2	1.1	61.1	883.2	654.6	145.9	3.9	1.000229
10500.0	702.6	6.6	2.5	74.9	871.4	652.9	136.4	3.4	1.000230
11000.0	689.6	5.4	2.3	80.2	859.1	651.5	123.1	3.2	1.000227
11500.0	676.9	4.3	1.6	82.9	846.7	650.1	98.7	3.7	1.000223
12000.0	664.4	3.1	1.0	85.7	834.6	648.8	87.6	4.6	1.000219
12500.0	652.0	2.1	-.9	80.1	822.4	647.5	91.7	5.1	1.000212
13000.0	639.9	1.3	-4.3	66.6	810.1	646.2	101.1	5.1	1.000203
13500.0	627.9	.4	-8.0	53.1	798.0	645.0	124.4	4.4	1.000195
14000.0	616.1	-.4	-9.5	50.1	785.3	644.0	149.6	3.1	1.000190
14500.0	604.5	-1.0	-8.7	55.8	772.3	643.3	206.1	2.2	1.000188
15000.0	593.1	-1.7	-9.1	57.0	759.6	642.5			1.000185
15500.0	581.8	-2.4	-12.6	45.2	747.5	641.5			1.000179

STATION ALTITUDE 3989.00 FEET SL
17 SEP 71 1315 HRS MDT
ASCENSION NO. 004

MANDATORY LEVELS
26000206004
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 14

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	5252.	18.4	8.1	51.	155.0	7.4
800.0	6945.	13.6	6.5	62.	149.8	6.2
750.0	8715.	9.2	3.6	68.	145.4	5.0
700.0	10589.	6.3	2.8	78.	134.1	5.4
650.0	12571.	2.0	-1.5	78.	92.4	5.2
600.0	14678.	-1.3	-8.4	58.		

STATION ALTITUDE 3989.00 FEET MSL
17 SEP. 81 1500 HRS MDT
ASCENSION NO. 005

SIGNIFICANT LEVEL DATA
26000,06,05
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 15

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
887.0	3989.0	26.1	14.2	42.0
884.4	4073.6	25.7	10.4	43.0
850.0	5204.9	19.8	8.8	49.0
722.8	9702.8	8.0	3.8	75.0
700.0	10571.0	6.4	1.1	69.0
677.8	11438.9	4.8	1.7	80.0
651.0	12519.4	3.8	-7.9	42.0
633.6	13241.4	2.5	-9.1	42.0
616.4	13970.5	.5	-7.5	55.0

STATION LATITUDE 3930.0 FEET MSL
17 SEP. 81 1500 HRS MDT
RADIOSONDE NO. 005

UPPER AIR DATA
2000 FEET
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 16

GEOPOTENTIAL ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	RELATIVE PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3099.	887.6	26.1	12.2	42.0	1026.3	676.0	155.0	8.0	1.000279
4000.	880.7	25.8	12.0	42.1	1027.1	675.6	154.9	8.0	1.000276
4500.	871.3	22.2	9.8	45.3	1022.1	671.3	156.0	8.4	1.000261
5000.	850.1	20.5	9.1	47.9	1018.4	669.3	146.0	8.9	1.000276
5500.	841.8	19.6	8.6	50.7	997.7	667.6	145.5	9.5	1.000272
6000.	820.0	17.7	8.2	53.6	984.4	660.1	141.9	9.5	1.000268
6500.	811.2	16.4	7.7	56.5	971.2	664.0	143.3	8.4	1.000264
7000.	790.8	15.1	7.2	59.4	958.3	663.0	142.9	7.5	1.000260
7500.	782.5	13.6	6.7	62.3	945.6	661.5	141.1	6.7	1.000256
8000.	760.5	12.5	6.1	65.2	933.0	659.9	139.6	6.5	1.000252
8500.	754.8	11.2	5.5	68.0	920.7	658.4	138.0	6.3	1.000248
9000.	741.3	9.8	4.8	70.9	908.6	656.8	140.3	5.7	1.000243
9500.	720.1	8.5	4.1	73.8	896.8	655.2	141.5	5.0	1.000239
10000.	714.9	7.5	2.9	72.9	884.8	653.8	135.3	3.9	1.000233
10500.	701.8	6.5	1.4	69.5	871.8	652.7	124.3	2.9	1.000227
11000.	686.9	5.6	1.4	74.4	857.8	651.7	113.5	3.1	1.000224
11500.	670.3	4.7	1.2	77.9	844.6	650.6	105.7	3.2	1.000221
12000.	660.7	4.3	-2.7	60.3	831.1	649.8	120.7	2.4	1.000210
12500.	651.5	3.8	-7.7	42.7	817.8	649.0			1.000199
13000.	639.4	2.3	-8.7	42.0	805.2	647.9			1.000195
13500.	627.4	1.8	-8.4	46.6	793.5	646.6			1.000193

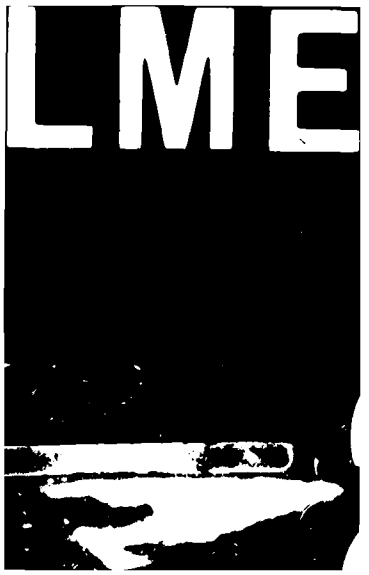
STATION ALTITUDE 3989.00 FEET MSL
17 SEP. 71 1500 HRS MDT
ASCENSION NO. 005

MANDATORY LEVELS
26000.0000
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 17

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	5201.	19.8	8.8	49.	145.4	9.2
800.0	6903.	15.4	7.4	59.	143.2	7.6
750.0	8686.	10.7	5.3	69.	139.3	0.1
700.0	10560.	6.4	1.1	69.	123.0	2.9
650.0	12547.	3.7	-8.0	42.		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